

1
cont.
wherein lysine, a lysine analog, or a lysine precursor is exogenously added to the culture to provide a concentration of at least 10 mmoles lysine, lysine analog, or lysine precursor per liter of culture during the entire culturing step; and

(b) recovering said biotin vitamer.

2. (Amended) A method of producing a biotin vitamer by:

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(a) culturing a bacterium comprising a lysine-utilizing DAPA aminotransferase, wherein the lysine biosynthetic pathway is deregulated in said bacterium; and

(b) recovering said biotin vitamer.

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6. (Twice amended) The method of claim 2 or claim 4, in which lysine, a lysine analog, or a lysine precursor is exogenously added to the culture to provide a concentration of at least 10 mmoles lysine, lysine analog, or lysine precursor per liter of culture during the entire culturing step.

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11. (Amended) The method of claim 1 or claim 2, wherein at least one biotin synthetic pathway step in addition to expression of the *bioA* gene is deregulated in said bacterium.

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13. (Amended) The method of claim 1, claim 2, claim 3, or claim 4, wherein said bacterium is further engineered to produce a S-adenosylmethionine (SAM)-utilizing DAPA aminotransferase.

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17. (Amended) The method of claim 15 in which lysine or a lysine analog exogenously added to the culture provides a concentration of at least 10 mmoles lysine or lysine analog per liter of culture during the entire culturing step.

18. (Amended) The method of claim 16 in which lysine or a lysine analog exogenously added to the culture provides a concentration of at least 10 mmoles lysine or lysine analog per liter of culture during the entire culturing step.

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21. (Amended) The method of claim 13 wherein at least one biotin synthetic pathway step other than expression of the *bioA* gene is deregulated in said bacterium.

REMARKS

The undersigned counsel wishes to thank Examiners Delia M. Ramirez and Rebecca Prouty for the courtesies extended during a teleconference on February 7, 2003 during which the §112 rejections were discussed. As we expressed to the Examiner during the interview, and as we develop in more detail below, we were shocked to find that the present rejection reopens issues that were fully examined and resolved during prior prosecution. We are especially surprised that the PTO rejected